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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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DELAND LAW OFFICE			LUONG, VINH	
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/711,702	KAWAKAMI, TATSUYA	
	Examiner	Art Unit	
	Vinh T. Luong	3682	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) Responsive to communication(s) filed on 1/10/08.

2a) This action is **FINAL**. 2b) This action is non-final.

3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) Claim(s) 1-17 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) Claim(s) _____ is/are allowed.

6) Claim(s) 1-17 is/are rejected.

7) Claim(s) _____ is/are objected to.

8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) The specification is objected to by the Examiner.

10) The drawing(s) filed on 30 September 2004 is/are: a) accepted or b) objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a) All b) Some * c) None of:

1. Certified copies of the priority documents have been received.
2. Certified copies of the priority documents have been received in Application No. _____.
3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) Notice of References Cited (PTO-892)

2) Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____.

4) Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.

5) Notice of Informal Patent Application

6) Other: Attachment.

1. Applicant's election of the species of FIGS. 10 and 11 in the reply filed on January 10, 2008 is acknowledged. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse. MPEP § 818.03(a).
2. No claim is withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected species, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on January 10, 2008.
3. The drawings are objected to because of the reasons, *e.g.*, listed below:

- (a) The drawings are not in compliance with 37 CFR 1.84. See Form PTO-948 attached;
- (b) The drawings should show the plane upon which a sectional view, such as, FIG. 4 or 5 is taken. 37 CFR 1.84(h)(3); and
- (c) The various parts in exploded view, such as, FIG. 3, should be embraced by a bracket in order to show their relationship. 37 CFR 1.84(h)(1).

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an

application must be labeled in the top margin as either “Replacement Sheet” or “New Sheet” pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. *The objection to the drawings will not be held in abeyance.*

4. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the claimed features, such as, “*a first* home position,” and “*a first* shift position” in Claim 1, “*a second* home position,” “*a second* shift position,” and the operating device in Claim 13 must be shown or the features canceled from the claims. No new matter should be entered.

The drawings only show the home position as described in, *e.g.*, Brief Description of the Drawings and paragraph [0027] of the specification. It is unclear whether the home position illustrated in the drawings (FIG. 6) is the *first* home position or the *second* home position. Assuming *arguendo* that the drawings show the *second* home position, Applicant is required to show the *first* home position or *vice versa* in accordance with 37 CFR 1.84(h)(4). Similar requirement is applied to the claimed *first* and *second shift* positions.

5. New corrected drawings in compliance with 37 CFR 1.121(d) are required in this application because of the objections above. Applicant is advised to employ the services of a competent patent draftsperson outside the Office, as the U.S. Patent and Trademark Office no longer prepares new drawings. *The corrected drawings are required in reply to the Office action to avoid abandonment of the application. The requirement for corrected drawings will not be held in abeyance.*

6. The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter, such as, “*a first* operating body,” “*a first* transmission,” “*a first* home position,” and “*a first* shift position” in Claim 1; “*a second* operating body,” “*a second* home position,” and “*a second* shift position” in Claim 13, *etc.* Applicant is respectfully suggested to use the same numerical order in the specification and the claims. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction is required.

7. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

8. Claims 1-17 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

It is unclear:

(a) the terms, such as, “*a first* home position” and “*a first* shift position” in Claim 1, “*a second* home position,” and “*a second* shift position” in Claim 13 refer to which figures described in the specification. Applicant is respectfully suggested to identify each claimed position with reference to the drawings;

(b) which structure(s) define(s) the claimed element, such as, the operating device in Claim 13. Applicant is respectfully suggested to identify each claimed element with reference to the drawings; and

(c) whether a confusing variety of terms, such as, “an operating force receiving member” and “an operating force receiving surface” in Claim 7/6/1 refer to the same or different things.

See MPEP 608.01(o) and double inclusion in MPEP 2173.05(o). Applicant is respectfully suggested to identify each claimed element with reference to the drawings.

The term, such as, “rotatable” in Claim 1 is vague and indefinite in the sense that things which may be done are not required to be done. For example, the control body is rotatable, but is not required structurally to be rotated about a rotational axis for controlling the shift control cable. See “discardable” in *Mathis v. Hydro Air Industries*, 1 USPQ2d 1513, 1527 (D.C. Calif. 1986), “crimpable” in *Application of Collier*, 158 USPQ 266 (CCPA 1968), “removable” in *In re Burke Inc.*, 22 USPQ2d 1368, 1372 (D.C. Calif. 1992), and “comparable” in *Ex parte Anderson*, 21 USPQ2d 1241, 1249 (BPAI 1992).

The term “substantially” in Claims 3-5, 9, and 10 is a relative term which renders the claim indefinite. The term “substantially” is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention. For example, in Claim 4, it is unclear what range of angles defined by the axes P and HB is considered to be “substantially perpendicular.”

Claim 13 recites the limitation “the operating device” in line 2. There is insufficient antecedent basis for this limitation in the claim.

9. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

10. Claims 1-3 and 6-17, as best understood, are rejected under 35 U.S.C. 102(b) as being anticipated by Shahana (EP 1 134 158 A2 cited as an X category reference in European Search Report and is equivalent to US Patent No. 6,450,060 also cited by Applicant).

As noted, FIGS. 1-7 of Shahana are *substantially* identical, if not identical to FIGS. 1-7 of this application. Thus, Shahana teaches the first species of FIGS. 1-7 of this application. Since Claim 1 is generic, *a fortiori*, Claim 1 is anticipated by Shahana. Similarly, all of the generic claims of this application are likewise anticipated by Shahana.

Regarding 1, Shahana teaches a bicycle shift control device 105 which operates a shifting mechanism via a shift control cable 104, the shift control device 105 comprising:

a mounting member 103 *structured to mount the shift control device 105 to a handlebar 101*, wherein the mounting member 103 defines a handlebar mounting axis (HB, see FIGS. 1-5 of Attachment hereinafter “Att.”);

a control body 170 supported by the mounting member 103 and rotatable about a rotational axis (X in Att. and abstract) for controlling the shift control cable 104;

a first operating body 220 having an abutment 201 in a position spaced apart from the control body 170 and which is coupled to the shift control device 105 for displacement between a first home position and a first shift position;

a first transmission 150 which converts the displacement of the first operating body 220 from the first home position to the first shift position into a rotational displacement of the control body 170, wherein the first transmission 150 includes a plurality of ratchet teeth 172, 173; an interface member 202, 131 movably mounted relative to the first operating body 220 and having an operating force receiving surface 203, 132 and an operating force applying surface 204,

wherein the operating force receiving surface 203, 132 is *adapted* to receive an operating force from a rider;

wherein the interface member 202, 131 pivots around a pivot axis (P, see FIG. 3 of Att.) so that the operating force applying surface 204 applies the operating force to the abutment 201 of the first operating body 220 for moving the first operating body 220 from the first home position to the first shift position;

wherein the pivot axis (P, FIG. 3 of Att.) is capable of being *inclined* relative to the handlebar mounting axis (HB in FIGS. 1-5, *ibid.* paragraphs [0016] and [0017], and Claim 3); and

wherein the interface member 202, 131 moves in a direction toward a plane (PL, FIG. 3 of Att.) that contains the handlebar mounting axis (HB in Att.) and is parallel with the rotational axis (X) when the first operating body 220 moves from the first home position toward the first shift position.

Claim 1 and other claimed below are anticipated by Shahana because Shahana teaches each and every positively claimed element. As noted, Applicant describes in paragraph [0025] of the specification that “[w]hile operating tab 202 pivoted around a pivot axis (P) that was *substantially* parallel to the handlebar axis (HB) in the above embodiments, the pivot axis (P) *could be* inclined relative to the handlebar axis (HB) by any degree to accommodate different riding styles” (emphasis added). In other words, Applicant explicitly admitted that the pivot axis P in the embodiment of FIGS. 1-7 is *capable of* being inclined relative to the handlebar axis. Further, the term “*substantially*” is a relative term. MPEP 2173.05(b). Therefore, Applicant’s statement “a pivot axis (P) that was *substantially* parallel to the handlebar axis (HB)” admits that

the axis P is not required to be exactly parallel to the axis HB. *Cf., Performed Line Products Co. v. Fanner Mfg. Co.*, 124 USPQ 288 (N.D. Ohio 1960) (“substantially the same as” and “substantially corresponding to” imply clearly that some thing less than exact correspondence is required). Since the pivot axis P is not exactly parallel to the handlebar axis HB, the axis P is inherently inclined relative to the axis HB because the axis P will eventually intersect with the axis HP. See the definitions of the terms “parallel” and “incline” in *Webster’s II New Riverside University Dictionary* attached.

On the other hand, it is well settled that a recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then, it meets the claim. See *In re Casey*, 152 USPQ 235 (CCPA 1967) and *In re Otto*, 136 USPQ 458, 459 (CCPA 1963). Put in another fashion, the functional limitations recited in applicant’s claims are not patentably distinguishing since those limitations are inherent in Shahana reference. *In re Schreiber*, 44 USPQ2d 1429 (CAFC 1997). In addition, it is well settled that the “wherein” or “whereby” clause that merely states the inherent results of limitations in the claim adds nothing to the claim’s patentability or substance. *Texas Instruments Inc. v. International Trade Commission*, 26 USPQ2d 1018 (Fed. Cir. 1993); *Griffin v. Bertina*, 62 USPQ2d 1431 (Fed. Cir. 2002); *Amazon.com Inc. v. Barnesandnoble.com Inc.*, 57 USPQ2d 1747 (Fed. Cir. 2001).

Regarding Claim 2, the plurality of ratchet teeth 173 are disposed in a ratchet teeth plane T (FIGS. 3-5), and wherein the ratchet teeth plane T (FIGS. 3-5) is parallel to a horizontal axis (H in FIG. 4 of Att.). *Ibid.* Claim 4.

Regarding Claim 3, the plurality of ratchet teeth 173 are disposed in a ratchet teeth plane T (FIGS. 3-5), and wherein a path of movement of the first operating body 220 is *substantially* parallel to the ratchet teeth plane T as seen in FIGS. 3-5.

Regarding Claim 6, the interface member 202, 131 comprises a lever 202 or 131.

Regarding Claim 7, the lever 202 comprises an operating force receiving member 203 extending from the pivot axis (P); and an operating force applying member 204 (FIGS. 4 and 5) extending from the operating force receiving member 203. *Ibid. abstract.*

Regarding Claim 8, the pivot axis P is disposed at a junction between the operating force receiving member 203 and the operating force applying member 204 as seen in FIGS. 3-5.

Regarding Claim 9, the lever 202 has a *substantially* L shape.

Regarding Claim 10, the operating force applying member 204 extends *substantially* perpendicular from the operating force receiving member 203 as seen in FIG. 5.

Regarding Claim 11, the first operating body 220 moves linearly between the first home position and the first shift position. *Ibid. Claims 2 and 6.*

Regarding Claim 12, the first operating body 220 moves in a straight line (i.e., linearly) between the first home position and the first shift position. *Ibid. Claims 2 and 6.*

Regarding Claim 13, see a second operating body 130 coupled to the operating device for displacement between a second home position and a second shift position; and a second transmission 160 which converts the displacement of the second operating body 130 from the second home position to the second shift position into a rotational displacement of the control body 170. See abstract and Claims 1-7.

Regarding Claim 14, the second operating body 130 rotates between the second home position and the second shift position.

Regarding Claim 15, the second operating body 130 forms a finger contact part 132 in a position spaced apart from the control body 170 (FIG. 3).

Regarding Claim 16, the second operating body 130 rotates around the rotational axis (X in Att.).

Regarding Claim 17, see regarding Claim 12 above.

11. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

12. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

13. Claims 1-17, as best understood, are rejected under 35 U.S.C. 103(a) as being unpatentable over Shahana.

Regarding Claims 1-3 and 6-17, Shahana teaches the invention substantially as claimed. Moreover, Shahana suggests in paragraphs [0016] and [0017] to rearrange the pivot axis P of the tab (interface) 202 such that the pivot P is inclined relative to the handlebar mounting axis HB so

that the rider is not required to press perpendicular to the handlebar and without precision placement of the rider's thumb. See also Applicant's own admission in paragraph [0025] of the specification: “[w]hile operating tab 202 pivoted around a pivot axis (P) that was *substantially* parallel to the handlebar axis (HB) in the above embodiments, the pivot axis (P) *could be* inclined relative to the handlebar axis (HB) by any degree to accommodate different riding styles” (emphasis added).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to the pivot axis of Shahana's interface such that its pivot is inclined relative to the handlebar mounting axis so that the rider is not required to press perpendicular to the handlebar and without precision placement of the rider's thumb as taught or suggested by Shahana. The modification of Shahana's bicycle shift control device by rearranging the axes P and HB would not have been uniquely challenging to a person of ordinary skill in the art because it is no more than "the simple substitution of one known element for another or the mere application of a known technique to a piece of prior art ready for the improvement." *KSR Int'l. Co. v. Teleflex Inc.*, 127 S. Ct. 1727, 1741, 82 USPQ2d 1385, 1396 (2007). See also legal precedent regarding rearrangement of parts in MPEP 2144.04.

Regarding Claims 4 and 5, Shahana teaches the invention substantially as claimed. However, Shahana's pivot axis (P) is *substantially* parallel to the handlebar mounting axis (HB) and Shahana's pivot axis (P) is *substantially* perpendicular to the rotational axis (X).

On the one hand, Shahana's inclined angle defined by the axes P and HP broadly includes the angles of “*substantially 90°*”. In other words, Shahana suggests the modification in Claims 4 and 5. On the other hand, it is common knowledge in the art to rearrange Shahana's

axes P, HB and X such that Shahana's pivot axis P is *substantially* perpendicular to the handlebar mounting axis HB and Shahana's pivot axis P is *substantially* parallel to the rotational axis X in order to render unnecessary for the rider to press perpendicular to the handlebar and without precision placement of the rider's thumb.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to rearrange Shahana's axes such that Shahana's pivot axis is *substantially* perpendicular to the handlebar mounting axis and Shahana's pivot axis is *substantially* parallel to the rotational axis in order to render unnecessary for the rider to press perpendicular to the handlebar and without precision placement of the rider's thumb as taught or suggested by Shahana or by common knowledge in the art. *KSR Int'l. Co. v. Teleflex Inc.* and legal precedent regarding rearrangement of parts in MPEP 2144.04, *supra*.

14. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure: Sato (interface 74) and Shahana'035 (control body 80).

15. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Vinh T. Luong whose telephone number is 571-272-7109. The examiner can normally be reached on Monday - Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Ridley can be reached on 571-272-6917. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Vinh T Luong/
Primary Examiner, Art Unit 3682